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A Nationwide Assessment of the Scope and Impact of Agricultural Leadership Education

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Abstract

Agricultural leadership education is an important component of agricultural education programs across the country; yet, a national study of the scope and types of programs offered has not been conducted since 2003. The purpose of the current study was to provide national and timely data regarding the scope and type of opportunities offered in agricultural leadership education. Of the 56 responding institutions, 41 indicated offering agricultural leadership education opportunities. The types of opportunities offered include leadership majors, minors, options, foci, industry programs, graduate student programs, undergraduate programs, and leadership courses. Leadership courses and minors were identified as the two agricultural leadership education opportunities with the highest student enrollment, serving an estimated 7,904 and 1,581 students respectively. Leadership minors were also found to serve the highest proportion of students outside of colleges of agriculture. Responding faculty members in agricultural leadership education perceived the continued growth of leadership opportunities within their institution. Additionally, the majority of responding faculty identified moderate to substantial support for their agricultural leadership education endeavors from their home department, university colleagues, and the agriculture industry.

Keywords: agricultural leadership education; leadership; leadership education; leadership development

Like most disciplines, agricultural education has evolved. What began with teacher education as its primary mission has evolved into a dynamic discipline incorporating multiple interest areas including teacher education, agricultural leadership, agricultural communications, Extension education, and international programs to name a few. In 2005, a 27-member team met to begin work on "the first national research agenda to be developed and formally embraced by the broader discipline of agricultural education and communication" (Osborne, 2007, p. 2). Their work began by identifying "draft research priorities for each of the five major dimensions of the discipline" (Osborne, 2007, p. 2) which the team identified as: Agricultural Communications, Agricultural Leadership, Agricultural Education in Domestic and International Settings: Extension & Outreach, Agricultural Education in University and Postsecondary Settings, and Agricultural Education in Schools.

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While agricultural leadership may not have been the primary focus within agricultural education departments early on, Phipps, Osborne, Dyer, and Ball (2008) noted that leadership education has been a key component of agricultural education since its inception. Similarly, Townsend and Fritz (n.d.) stated, "leadership training has a rich heritage in Colleges of Agriculture and most departments of Agricultural Education can trace a history of leadership education for decades" (p. 19).

In the early 1990s, agricultural educators began calling for the programmatic diversification of agricultural education departments. Barrick (1993) proposed an agricultural education department conceptual model consisting of four components (Teaching and Learning, Human Resource Development and Management, Communication and Research Methodology, and Data Analysis) and identified the Human Resource Development and Management component as a missing element from agricultural education departments of the time. Newcomb (1993) also identified leadership as an important programmatic emphasis area to be included in agricultural education departments, stating in his Distinguished Lecture at the 1993 American Association for Agricultural Education (AAAE) annual meeting, "no area of the campus is better equipped to meet this need than agricultural education departments" (p. 5).

According to the National Research Agenda: Agricultural Education and Communication, 2007-2010 (Osborne, 2007),

> What is the place of leadership education within colleges of agriculture? What is the role of agricultural leadership educators as they tackle the serious task of preparing their clientele to face the changing world of agriculture and life sciences? Certainly, leadership education has a rich history in university-based academic programs in agriculture, and most departments of agricultural education have provided the bulk of this instruction for decades. As far back as the early 1900s, leadership educators have been formally prepared to advise FFA and 4-H members…Scholars are discovering theories for effective agricultural leadership and are using those basic principles to develop successful agricultural leadership education programs. (p. 12)

While previous research highlights the role of agricultural education departments in leadership education, there is a lack of recent, published studies which examine the current nationwide scope of agricultural leadership education. Individual programs from across the nation are left to wonder about the prevalence and size of other agricultural leadership programs. Additionally, a nationwide assessment of agricultural leadership education will provide scholars with foundational information regarding the need for continued research in the field of agricultural leadership education. Furthermore, as budgets tighten and departments consider the funding for individual programs, an understanding of the nationwide impact of agricultural leadership may aid in determining the growth potential and long-term sustainability of agricultural leadership programs.

Review of Literature

Two studies conducted within the agricultural education discipline, and more specifically within the agricultural leadership dimension attempted to document the number of agricultural education departments incorporating leadership education into their programmatic foci. Brown and Fritz (1994) surveyed all four-year, post-secondary institutions whose departmental title contained the words "agricultural education" about leadership and human resource management/development (HRM/D) courses offered. A total of 88 specific leadership and HRM/D titles were identified by study participants as being offered through departments of agricultural education. The researchers concluded, "sixty-five percent of the 55 four-year, post-secondary agricultural education departments surveyed in this study reported that they offered courses of this type" (Brown & Fritz, 1994, pp. 4-5). The Brown and Fritz (1994) study also examined enrollment history of the courses offered, faculty characteristics of individuals teaching

leadership courses, student reactions toward the leadership courses, and institutional support for leadership courses.

Fritz et al. (2003) surveyed department heads and chairs to describe the leadership courses offered by agricultural education departments. Sixty-eight percent of respondents indicated their department offered leadership courses; however, it must be noted that only 41 of the 92 departments (45%) participated in the study. In this study, 82 specific courses were identified as being taught in departments of agricultural education, yet one-third did not contain the word leadership in the title. Authors also described the type of students who took the courses (i.e., outside the college), student enrollment in the courses, student attitudes toward the courses, faculty characteristics of those teaching the courses, the ease or difficulty of getting courses approved at the college and university levels, and whether or not respondents were considering adding a faculty member in the area of leadership and HRM/D. Results led the authors to conclude "leadership education is a recognized component of collegiate agricultural education departments" (Fritz et al., 2003, p. 21).

While Birkenholz and Simonsen (2011) reported that nine of the 10 distinguished agricultural education programs in the country included specializations in leadership, it has been more than a decade since agricultural leadership programs have been quantitatively described and documented as a part of the more broadly defined agricultural education discipline. Since the last study that could be located was conducted, new majors and minors in agricultural leadership have been created. Pennington and Weeks (2006) stated, "in 2004, the American Association of [for] Agricultural Education determined that there were eight departments of agricultural education offering an area of study focused in leadership" (p. 42). However, the first to include leadership in the title, and the first officially recognized undergraduate major in Agricultural Leadership, was created in the College of Agricultural Sciences and Natural Resources at Oklahoma State University and housed in the Department of Agricultural Education, Communications, and 4-H Youth Development (Pennington & Weeks, 2006). To further develop programs and program understanding, the National Research Agenda in Priority 5: Efficient and Effective Agricultural Education Programs (Doerfert, 2011) calls for "accurate and reliable data that describes the quality and impact of educational programs and outreach efforts at all levels" (p. 10). Thus, it is important to determine and describe the current scope of agricultural leadership education programs within agricultural education in higher education today.

Purpose and Objectives

As agricultural education continues to evolve so does agricultural leadership education. This study attempted to describe the current state of agricultural leadership education by identifying the number and types of opportunities offered, the students enrolled in these opportunities, and responding faculty members' perceptions of past enrollment, future enrollment, and support. By describing agricultural leadership education, this study sought to provide timely, national data regarding the leadership opportunities provided through agricultural education. The specific objectives of this study were to:

1. Identify the number of agricultural leadership opportunities and the types of opportunities offered (i.e., major, minor, option, focus area, program, course, and industry);
2. Determine student enrollment in agricultural leadership education;
3. Define the distribution of students based on home department, college of agriculture, and university;
4. Determine faculty perceptions of past and future enrollment in agricultural leadership education; and

5. Identify the perceived levels of support provided by the department, university colleagues, agricultural industry, and the American Association for Agricultural Education (AAAE).

Methods

One of the inherent difficulties when researching agricultural leadership education is the development and establishment of a population frame. Agricultural leadership is often embedded within departments that do not evidence leadership in the department title and are not readily identifiable through an internet search. Furthermore, many departments may only offer one or two courses that are relatively unknown to others in the agricultural leadership profession and at times, others in the department. Evidence of the difficulty in establishing a consistent frame can be found by examining the frames of the last two similar studies (Brown & Fritz, 1994; Fritz et al., 2003).

In 1994, Brown and Fritz reported 55 departments as their population frame. Their frame was identified by examining the AAAE directory and was limited to only departments that contained agricultural education in the title. Fritz et al. (2003) were the last to publish a study examining the scope and breadth of agricultural leadership education. Their frame consisted of 92 departments listed in the AAAE directory.

The frame for this research consisted of all departments or programs in the United States currently engaged in agricultural education. For this study, we established the population frame by examining the AAAE directory and identifying programs engaged in agricultural education, which revealed 81 such departments or programs. Given the historic difficulty in determining the specific agricultural departments or programs that offer agricultural leadership education, we chose to send email solicitations to the entire identified population frame. We were unable to make contact with the selected faculty members from five institutions; therefore, the useable frame included 76 departments or programs.

After identifying a frame, the next challenge was to identify a single individual in the department who could provide the enrollment, course, and department information needed. In prior studies, the survey was sent to the department heads; however, given the type of information requested, we believed that in some cases, the information would be more readily available and attainable by direct contact with faculty members. To address this, a list of the individuals initially identified in the frame were examined by a panel of four faculty members and one graduate student involved in agricultural leadership education. Collectively, this panel of experts had 55 years of experience in agricultural leadership education. The panel reviewed the frame and provided comments on the appropriateness of the listed individuals. Several changes were made to the recipient list resulting in a final list containing a mix of both department heads and faculty members, which identified a single individual from each department or program. While every effort was made to establish a trustworthy frame and develop a valid instrument, as with all survey research, the data provided are dependent on the truthfulness of respondents.

Instrumentation

We examined prior survey research instruments utilized in two similar studies (Brown & Fritz, 1994; Fritz et al., 2003). After review of the prior literature, we developed a survey instrument that requested the data necessary to address the objectives of the study. The survey instrument was then reviewed by a panel of experts consisting of four faculty members within agricultural leadership education and one graduate student. Changes were made to enhance the clarity of the questions and refine the electronic instrumentation format.

The final instrument consisted of nine sections. The first section requested participants indicate their name and institutional affiliation as well as a series of yes/no questions answering if the leadership opportunities of interest (i.e., major, minor, option, focus area, program, course, and industry program) were offered through the agricultural education department within their institution. Based on their responses, respondents were directed to questions pertaining to the different leadership opportunities offered through their department. Questions within these sections included student enrollment, year agricultural leadership opportunity was established, student distribution, distance learning availability, and an opportunity to provide additional information.

In the final section, respondents were asked to share information regarding past and future growth of agricultural leadership education within their institution and perceived support for agricultural leadership education. If/then logic was used throughout the survey to eliminate questions participants indicated did not pertain to them. This greatly enhanced the survey and resulted in an average response range of seven to 12 minutes.

Data Collection

Using the finalized list of contact individuals, requests to participate were sent to all 76 individuals identified. The initial contact email also contained a request to notify us if the email was not sent to the most appropriate individual within the department or program to provide enrollment, course, and department data. This initial invite resulted in seven notifications of more appropriate contact individuals. The frame was then further refined and we sent out the survey via the online survey provider Qualtrics. Dillman's Tailored Design method (2000) was utilized as a guide to conduct this research and participants received an initial invitation and up to three email reminders. Data were collected between August 20 and September 13, 2013. Given the wide disparity in the size of agricultural leadership programs, ranging from single courses to programs with full academic majors and minors, we did not attempt to generalize the findings to the entire frame. Therefore, after four email solicitations, no further attempt was made to follow up with nonrespondents.

We received a total of 56 useable instruments resulting in a 74% response rate. Of the respondents, 15 programs indicated they do not currently offer any agricultural leadership education coursework or programs. The remaining 41 respondents indicated offering some type of agricultural leadership education.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 20. Frequencies were utilized to accomplish research objectives one, four, and five. Enrollment totals for each of the leadership opportunities were calculated for research objective number two. Average student distribution across department, college of agriculture, and university were calculated to accomplish the third research objective. For research objectives one and two, data were presented by AAAE region. By presenting information in this way, we aimed to provide a more descriptive picture of agricultural leadership education as well as provide information useful for potential professional development opportunities in agricultural leadership education offered regionally. Regional affiliation was broken down into the North Central Region (n = 20), Southern Region (n = 25), and Western Region (n = 11). All schools, with the exception of Oklahoma State University, Texas Tech University, and Texas A&M University, are geographically relegated to a specific region. However, for faculty at Oklahoma State, Texas Tech, and Texas A&M, regional affiliation is an individual decision. For the purposes of reporting results, we assigned affiliation based on the majority of faculty member affiliations as identified through the AAAE website. Based on the proportion of faculty reported affiliations,

Oklahoma State University and Texas A&M University were included in the Southern region and Texas Tech University was included in the Western Region.

Findings

The purpose of this study was to describe the current state of agricultural leadership education. In this effort, data were collected identifying the number and types of leadership programs offered, number of students impacted by these leadership programs, distribution of these students, faculty perceptions of past and future enrollment, and faculty perceptions of support.

The first objective of this study was to identify the number of agricultural leadership education opportunities and the types of opportunities offered (see Table 1). Based on previous literature describing agricultural leadership education (Brown & Fritz, 1994; Fritz et al., 2003), six types of undergraduate leadership opportunities were presented including leadership majors, minors, options, foci, programs, and courses. Of these six opportunities, leadership courses were identified as the most commonly offered agricultural leadership experience with a total of 38 (68%) of the responding institutions indicating offering at least one leadership course. The Southern Region was identified as offering the largest number of majors, minors, options, foci, programs, and courses.

Table 1

Number and Type of Undergraduate Agricultural Leadership Education Opportunities by Region (n = 56)

	Number of Responding Institutions Offering Leadership Opportunities					
AAAE Region	Leadership Major	Leadership Minor	Leadership Option	Leadership Focus	Leadership Program[a]	Leadership Course
North-Central	1	5	7	1	3	12
Southern	4	6	7	9	10	19
Western	0	2	2	1	1	7
Total	5	13	16	11	14	38

Note. North Central (*n* = 20); Southern Region (*n* = 25); Western Region (*n* = 11).
[a]Examples include certificates, academies, and living/learning communities.

The second objective of this study was to identify student enrollment in agricultural leadership education (see Table 2). We acknowledge that many students participate in multiple agricultural leadership experiences and courses; therefore, a total number of unduplicated students impacted through agricultural leadership education cannot be determined.

Responding institutions in the Southern Region were identified as having the largest student enrollment in leadership majors, minors, foci, programs, and courses. Responding institutions in the North Central Region were found to have the highest student enrollment in leadership options. Of the leadership development opportunities offered through agricultural leadership education, leadership courses and leadership minors were found to impact the highest number of students.

Table 2

Student Enrollment in Agricultural Leadership Education by Region (n = 56)

	Number of Students Impacted at Responding Institutions					
AAAE Region	Leadership Major	Leadership Minor	Leadership Option	Leadership Focus	Leadership Program[a]	Leadership Courses
North-Central	25	653	132	0	193	3,053
Southern	803	867	84	106	372	4,163
Western	0	61	56	10	18	688
Total	828	1,581	272	116	583	7,904

Note. North Central (*n* = 20); Southern Region (*n* = 25); Western Region (*n* = 11).
[a]Examples include certificates, academies, and living/learning communities.

In addition to undergraduate leadership education opportunities, responding institutions indicated offering both industry and graduate level leadership development programs. Seven institutions offered an industry leadership program. A total of 72 participants were enrolled in these industry leadership development opportunities. Additionally, eight institutions offered a graduate level leadership development program. Responding institutions reported a total of 130 graduate students enrolled in these graduate agricultural leadership education programs.

The third objective of this study was to describe the distribution of enrollment in agricultural leadership education by home department, college of agriculture, and university (see Table 3). Respondents were asked to estimate the percentage of students in each agricultural leadership experience from their home department (department offering agricultural education) and the college of agriculture. From this information, we could estimate the number of students participating in agricultural leadership education who were enrolled in colleges other than a college of agriculture.

Table 3

Student Enrollment Percentages in Agricultural Leadership Education Separated by Department, College, and University (n = 56)

	Demographics of Student Enrollment at Responding Institutions					
Students From	Leadership Major	Leadership Minor	Leadership Option	Leadership Focus	Leadership Program[a]	Leadership Courses
Home Department	93.75	25.75	85.38	90.00	38.10	57.63
College of Agriculture	3.00	33.92	9.62	5.00	31.45	26.11
University	3.25	40.33	5.00	5.00	30.45	16.26

Note. Enrollment percentages distinctive to either home department, or college of agriculture, or university.
[a]Examples include certificates, academies, and living/learning communities.

Average student enrollment percentages identify the overwhelming majority of students enrolled in leadership majors, leadership options, leadership foci, and leadership courses come from the department offering agricultural education. Alternatively, leadership minors and leadership programs had a greater distribution of student enrollment.

The fourth research objective sought to identify the perceptions of responding faculty regarding changes in student enrollment in agricultural leadership education over the past 10 years as well as their projection of the change in student enrollment over the next 10 years (see Table 4). Fifteen respondents perceived "no change" in agricultural leadership education enrollment over the past 10 years within their institution and 28 (61%) respondents indicated some level of enrollment increase over the past 10 years.

When asked their perceptions of the future enrollment in agricultural leadership education, 13 respondents indicated they expect a "substantial increase." Additionally, 35 (76%) respondents indicated they expected some level of increase in student enrollment at their institution over the next 10 years (see Table 4).

Table 4

Perception of the Change in Past and Future Agricultural Leadership Education Enrollment (n = 56)

	Perceived Change in Leadership Enrollment at Responding Institutions[1]						
	Substantial Decline	Moderate Decline	Minimal Decline	No Change	Minimal Increase	Moderate Increase	Substantial Increase
Past Ten Years	2	2	0	15	8	7	13
Next Ten Years	1	0	0	10	11	12	13

Note. Number in cells represents frequency of response.

The final objective of this study was to identify respondents' perception of support received from their home department, institutional peers, the agricultural industry, and AAAE (see Table 5). These findings indicate the majority of respondents perceive substantial support from their home department. Furthermore, respondents indicated receiving moderate support from institutional peers and the agricultural industry, and minimal to moderate support from AAAE toward their agricultural leadership education endeavors.

Table 5

Perceived Support for Agricultural Leadership Education (n = 56)

	Perceived Level of Perceived Support at Responding Institutions [1]			
	No Support	Minimal Support	Moderate Support	Substantial Support
Home Department	4	7	14	20
Institutional Peers	4	13	22	5
Agricultural Industry	4	6	24	8
AAAE	10	14	17	4

Note. Number in cells represents frequency of response.

Conclusions, Implications, and Recommendations

Analysis of objective one revealed agricultural leadership education opportunities are prevalent and growing across the nation. Perhaps as a result of some of the earlier calls and the visionary leadership of department heads and deans, agricultural leadership education is growing. Based on the information respondents provided regarding the development timeline of the agricultural leadership opportunities within their institution, we identified the addition of three leadership majors, six leadership minors, seven leadership focus areas, seven undergraduate leadership programs, and four graduate agricultural leadership programs since the last nationwide assessment of agricultural leadership education (Fritz et al., 2003).

An implication of recent growth is the need to determine whether departments and programs have the resources needed to establish and sustain an exemplary agricultural leadership program. Future research should explore the capacity for agricultural education departments to expand in the field of leadership education.

The results of the second objective highlight the high number of students involved in agricultural leadership education with some distinctions between AAAE regions. By far the greatest student impact in agricultural leadership education is through leadership minors and leadership courses. Given the student attraction, programs looking to increase student numbers should consider the development of new courses or minors. When comparing regions, the Southern region impacts the greatest number of students, followed closely by the North Central region.

Objective three examined the enrollment distribution of students across six leadership areas. Not surprising, leadership majors, options, and foci served predominately departmental students while leadership minors, programs, and courses serve a mix of department, college, and university students. If a department is seeking growth and expansion in agricultural leadership, they should identify the audience they are hoping to attract and develop the appropriate leadership programming. If university students are the intended audience, minors and courses appear to be the best avenue for engagement. On the other hand, if departments are focusing on their own students, the development of options, foci, and eventually majors would be more appropriate.

Faculty respondents perceived past and future growth of agricultural leadership education. The majority of respondents indicated either no change or some form of increase in enrollment over the past ten years and in the next ten years. In fact, only five respondents indicated any form of perceived decline over this 20 year period. Based on these findings, we recommend agricultural leadership education programs establish a plan for growth and a vision for adding additional leadership programing, infrastructure, and faculty.

The last objective of this study revealed faculty members, in general, feel supported by their home department, institutional peers, and the agricultural industry. However, 53% of the respondents indicated feeling the AAAE (the professional organization with which agricultural leadership educators historically affiliate) provided no or minimal support to their agricultural leadership education endeavors.

While the strength of support at the local and industry level is encouraging, who is providing the professional development needed to ensure high quality, pedagogically sound agricultural leadership education? As agricultural leadership education continues to grow and develop, department heads and program leads should consider allocating funding to allow faculty to find and engage in focused professional development centered on agricultural leadership education. Two such opportunities have included the 2004 and 2013 Agricultural Education Leadership Summits which provided agricultural leadership education faculty with the chance to enhance pedagogy, develop assessments, identify research areas, and pursue extramural funding. Given the growth in agricultural leadership, we recommend the establishment of similar national meetings on a more regular basis. Additionally, we recommend future research exploring professional development opportunities for agricultural leadership educators through general leadership development conferences (e.g., Association of Leadership Educators and the International Leadership Association).

Given the length of time between agricultural leadership education studies, and the amount of change in the past ten years alone, we recommend continued studies in this field. Specifically, research exploring the number of agricultural education faculty currently involved in agricultural leadership education as it would provide useful information into the need for professional development experiences in this area. Additionally, in an effort to more fully understand student enrollment in agricultural leadership education, research exploring the specific courses offered through agriculture leadership education and the enrollment within these courses is warranted. Finally, research exploring the number of students graduating from agricultural leadership programs will add valuable insight into the overall impact of agricultural leadership education. As agricultural leadership education continues to evolve, research providing consistent data on the scope of this discipline is necessary.

Agricultural leadership education is vibrant and growing in both programs and student numbers. In the next few years it is vital that the profession take meaningful steps to establish sound leadership pedagogy, gain clarity on purpose, and make a continued effort to support the professional development of faculty. With an established purpose, agricultural leadership educators will be better positioned to provide scholarly contributions, enhance student growth, and positively impact departments, colleges, and universities.

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